

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/EP 03/00015

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 H05H15/00 G21G1/10

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 H05H G21B G21G

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

WPI Data, PAJ, EPO-Internal, INSPEC

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>VYSOTSKII V I ET AL: "Creating and using of superdense micro-beams of relativistic electrons"  <b>INTERNATIONAL SYMPOSIUM ON NEW VISIONS IN LASER-BEAM INTERACTIONS: FUNDAMENTAL PROBLEMS AND APPLICATIONS OF LASER-COMPTON SCATTERING, TOKYO, JAPAN, 11-15 OCT. 1999, vol. 455, no. 1, pages 123-127,  XP004238304</b>  Nuclear Instruments &amp; Methods in Physics Research, Section A (Accelerators, Spectrometers, Detectors and Associated Equipment), 21 Nov. 2000, Elsevier, Netherlands  ISSN: 0168-9002  cited in the application  page 126, left-hand column, paragraph 1 - last paragraph</p> <p>---</p> <p style="text-align: center;">-/-</p>	1,6,7,9, 16

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

° Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
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- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
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Date of the actual completion of the international search

Date of mailing of the international search report

27 August 2003

17/09/2003

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>DATABASE WPI          Section EI, Week 199609          Derwent Publications Ltd., London, GB;          Class V05, AN 1996-086109          XP002252565          &amp; SU 1 545 826 A (NUCLEAR RES INST),          20 July 1995 (1995-07-20)          cited in the application          abstract; figure          ---</p>	1,9,16
A	<p>ADAMENKO S ET AL: "Effect of          auto-focusing of the electron beam in the          relativistic vacuum diode"          PROCEEDINGS OF THE 1999 PARTICLE          ACCELERATOR CONFERENCE (CAT.          NO.99CH36366), PROCEEDINGS OF THE 1999          PARTICLE ACCELERATOR CONFERENCE, NEW YORK,          NY, USA, 27 MARCH-2 APRIL 1999,          pages 3271-3273 vol.5, XP002252564          1999, Piscataway, NJ, USA, IEEE, USA          ISBN: 0-7803-5573-3          cited in the application          abstract; figure 1          page 3273, paragraph 4          ---</p>	4,6
A	<p>DATABASE WPI          Section EI, Week 198719          Derwent Publications Ltd., London, GB;          Class S03, AN 1987-133993          XP002252566          &amp; SU 1 215 597 A (BATSANOV S S),          30 September 1986 (1986-09-30)          abstract; figure          ---</p>	1,9
A	<p>ASTRELIN V T ET AL: "Calculations on the          formation and transport of intense          electron beams"          ZHURNAL TEKHNICHESKOI FIZIKI, NOV. 1988,          USSR,          vol. 58, no. 11, pages 2168-2173,          XP008021184          ISSN: 0044-4642          page 1316, left-hand column, paragraph 1          page 1319, left-hand column, paragraph 1          ---</p>	1,9
A	<p>ASTRELIN V T ET AL: "PERFORMANCE OF A          MAGNETRON DIODE WITH A MULTITIP          EXPLOSIVE-EMISSION CATHODE"          SOVIET PHYSICS TECHNICAL PHYSICS, AMERICAN          INSTITUTE OF PHYSICS. NEW YORK, US,          vol. 33, no. 3, 1 March 1988 (1988-03-01),          pages 351-354, XP000048033          ---</p>	

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

Internat'l application No

PCT/EP 93/00015

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
SU 1545826	A 20-07-1995 SU	1545826 A1	20-07-1995
SU 1215597	A 30-09-1986 SU	1215597 A1	30-09-1986